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First Millennium AD: Roman and Byzantine Periods Landscape Archaeology and Settlement Patterns

Our advances in the archaeological knowledge of Roman-Byzantine Jordan has come in dramatic spurts. Brünnow and Domaszewski's exploration of Transjordan in the 1890s followed shortly afterwards by the Princeton Expedition (1904-1909) and Alois Musil's efforts (1908-1915) represents the first stage. After WWI, excavations at Jerash and Petra began, followed by the pioneering surveys of Transjordan by N. Glueck, A. Alt, and Sir Aurel Stein in the 1930s. After WWII, projects were more sporadic, but in the past twenty years there has been a virtual explosion of projects in every region of the country. The major advances have been in four areas: (1) The excavation of the major urban centers; (2) extensive surveys of the whole Transjordanian plateau and desert steppe; (3) the investigation of the Roman military infrastructure with excavation of key sites; and (4) the systematic exploration of the country for inscriptions that have resulted in a number of important epigraphical contributions, including the extension of the IGLS project to Jordan, with its counterpart *Inscriptions de la Jordanie*, of which two volumes have already appeared (Central and Southern Jordan), and others to follow. But this Greek and Latin corpus shrinks in comparison with the far more sizeable finds recently made of pre-Islamic Arabian inscriptions called Safaitic and Thamudic found mainly in the desert regions, but increasingly now in settled regions. More extensive literary evidence has come from discoveries of papyri, namely the publication of the archives from the Judean desert of the Bar Kokhba era that shed important light on the pre- and post-annexation period of Arabia. The more recent discovery of papyri from Petra of mainly the sixth century

are equally important contributions for the history of the region in late antiquity.

From all of these efforts, an extensive body of evidence has been provided for the history of the Roman and Byzantine eras before the Islamic conquests, which have helped integrate the region into the wider spectrum of the Mediterranean world.¹ But a comprehensive history of the Byzantine period from the fourth century to the seventh century still languishes. The major contributions here have been mainly thematic.² Excavations of many of the urban centres have contributed greatly to our understanding of the period; these include the Decapolis cities in the north — Pella (Ṭabaqat Faḥl), Gadara (Umm Qays), Abila (Wādī Quwayliba), Capitolias (Bayt Rās), Jarash, and Philadelphia ('Ammān), and Petra, al-Ḥumayma and al-'Aqaba in the south. The transportation lattice that connected all of these urban centers has also been illuminated. Of course, the major provincial spur was the *Via Nova Traiana* constructed between 111 and 114, connecting the new Arabian capital at Bostra in the Ḥawrān to Ayla on the Gulf of 'Aqaba, *a finibus Syriae usque ad mare rubrum*, some 430 km in length. But other roads were created simultaneously and subsequently elsewhere in Transjordan, as the work of Thomas Bauzou and David Kennedy in northeast Jordan and my own explorations in southern Jordan illustrate.³ Future maps of the Roman period should reflect the elaborate nature of this highway system, not just the single Trajanic artery known from the Peutinger Table. Nor should the popular theory that the Roman road system fell into disuse in the East during late antiquity, centuries before the Islamic conquests,⁴ be giv-

¹ The grand syntheses are G. W. Bowersock, *Roman Arabia* (Cambridge: Harvard, 1983), Maurice Sartre, *L'orient Romain* (Paris, 1991) Pp. 309-355, and F. Millar, *The Roman Near East* (Cambridge: Harvard, 1993).

² Such as I. Shahid's major project on *Byzantium and the Arabs* (Washington, DC: Dumbarton Oaks, 1984-1995), M. Piccirillo, *The Mosaics of Jordan* (Amman, 1993), and R. Schick, *The Christian Communities of Palestine from Byzantine to Islamic Rule* (Princeton: Darwin Press, 1995).

³ D. F. Graf, "The Via Nova Traiana in Arabia Petraea," in *The Ro-*

man and Byzantine Near East: Some Recent Archaeological Research, *Journal of Roman Archaeology* supplementary Series number 14 (Ann Arbor, 1995), Pp. 241-267; D. Kennedy, "Roman Roads and Routes in North-east Jordan," *Levant* 29 (1997) Pp. 71-93; and T. Bauzou, "Le secteur nord de la via nova en Arabie de Bušra à Philadelphia," in *Fouilles de Khirbet es-Samra en Jordanie I*, ed. J.-B. Humbert and A. Desreumaux (Turnhout: Brepols, 1998), Pp.101-255.

⁴ Richard Bulliet, *The Camel and the Wheel* (Cambridge: Harvard, 1975), Pp. 19-26.

en credence. Any assumption that the camel replaced wheeled vehicles for transporting goods throughout the Near East is belied by literary, epigraphic, papyrological, and archaeological evidence.⁵ What still lacks analysis is the rural landscape between the urban centers and the major arteries.

Demographic Patterns

The shift away from the great monuments of urban culture to the rural landscape has marked recent Roman archaeology elsewhere in the Mediterranean.⁶ But if the rural landscape has been neglected factor in other regions of the ancient Near East either for lack of data or lack of interest,⁷ it has not been true for Jordan. In fact, there have been a myriad of archaeological survey projects in the past several decades that have produced a picture of a fairly dense settlement pattern in Transjordan during the Roman-Byzantine era. These settlements extend from the Jordan rift to the desert fringe, supporting what must be considered the most sizeable population in antiquity for the region. The hydrological technology employed on the desert fringes and marginal lands for this expansive development is truly exemplary and has been duly noted.⁸ The importance of this evidence for the economy and society of the period is equally significant, but only hinted at in recent studies. The Roman period has not been subjected to analysis and even the important summaries of the Byzantine evidence provided by Michele Piccirillo in 1985, and more recently by S. T. Parker in 1992 and by Henry MacAdam and Robert Schick in 1994, are limited.⁹ The former is now outdated and the latter cover only the period from ca. 550 and afterwards. A more comprehensive appraisal of the results for Roman and Byzantine Jordan is then apropos.

These recent large-scale regional survey efforts began in the 1960s with S. Mittmann's exploration of the area between the Yarmūk and az-Zarqā' rivers. Of the 364 sites recorded, 170 showed traces of the Roman period

and an impressive 240 of the Byzantine era.¹⁰ In 1968-76, in conjunction with the Tall Ḥisbān excavation, a 10 km radius survey was conducted of the region around the site.¹¹ Some 148 sites were recorded, of which 57 had Early Roman pottery (38%) and 45 others Late Roman (30%), whereas Byzantine increased to 126 sites (85%). Further south, the "Central Moab survey" directed by J. Maxwell Miller recorded 443 sites on the Karak plateau between Wādī al-Mūjib and Wādī al-Ḥasā between 1978 and 1982.¹² Nabataean sites were predominant (65%), but only 115 were Late Roman (26%) and 107 Early Byzantine (24%), with a slight rise of 132 sites designated as Late Byzantine (30%). Since another 75 sites were labeled merely "Byzantine" (17%), the number of sites is fairly consistent across the Roman-Byzantine era. These results stand in contrast to the *Limes Arabicus* survey directed by S. Thomas Parker between 1980 and 1987 in the territory just east of Miller's survey.¹³ More than 557 sites were recorded; of these 334 (60%) yielded Nabataean and Early Roman pottery, whereas Late Roman was found on only 38 sites (7%), Early Byzantine on a mere 59 sites (11%), and a meager 18 with Late Byzantine (3% of the total), mostly in the western zone. An additional 100 sites (18%) had pottery designated as merely Byzantine, but the decline in sites from the earlier era is still dramatic.

For the region further south, the Wādī al-Ḥasā Survey directed by Burton MacDonald between 1979 and 1982 recorded 1,074 sites between the Wādī al-Ḥasā and aṭ-Ṭafila.¹⁴ Of these, 195 (18%) had Nabataean and early Roman sherds, but Late Roman sites diminished to 71 sites (7%), with another 25 yielding pottery of general "Late Roman-Byzantine" date. The clearly Byzantine sites numbered only 125 (12% of total), and were concentrated in the zone west of the *Via Nova Traiana* or just to the east in small clusters. In 1985-86, MacDonald directed another important project between the Southern Ghors at the northern edge of the Lisan peninsula to the

⁵ See my discussion in "Camels, Roads and Wheels in Late Antiquity," *Donum Amicitiae*, ed. E. Dabrowa (Kraków: Jagiellonian University Press) = *Electrum* 1 (1997), Pp. 43-49.

⁶ For example see G. Barker and J. Lloyd (eds.), *Roman Landscapes: Archaeological Survey in the Mediterranean Region* (London: British School at Rome, 1991), and *City, Town and Countryside in the Early Byzantine Era*, ed. R. Hohlfeder (New York, 1982).

⁷ As noted by M. Liverani, "Reconstructing the Rural Landscape of the Ancient Near East," *Journal of the Economic and Social History of the Orient* 39 (1996), Pp. 1-41. For the Late Roman Empire see now C. R. Whittaker and P. Garnsey, "Rural Life in the Later Roman Empire," in *The Cambridge Ancient History* XIII (1998) 277-310.

⁸ See J. P. Oleson, "Aqueducts, Cisterns and Strategy of Water Supply at Nabataean and Roman Auara (Jordan)," in *Future Currents in Aqueduct Studies*, ed. A. Trevor Hodge (Leeds: Francis Cairns Publications, 1991), 45-62, and D. Kennedy, "Water Supply and Use in the Southern Hauran, Jordan," *Journal of Field Archaeology* 22 (1995), Pp. 275-290.

⁹ M. Piccirillo, "Rural Settlements in Byzantine Jordan," *SHAJ* II (Amman, 1985) 257-261, S. T. Parker, "The Limes and Settlement

Patterns in the Roman and Byzantine Periods," *SHAJ* IV (Amman, 1992) 321-325; and H. I. MacAdam, "Settlements and Settlement Patterns in Northern and central Transjordan, ca. 550-ca. 750," (pp. 49-93), and R. Schick, "The Settlement Pattern of Southern Jordan: The Nature of the Evidence" (pp. 133-154) in *The Byzantine and Early Islamic Near East II: Land Use and Settlement Patterns*, ed. G. R. D. King and A. Cameron (Princeton: Darwin Press, 1994).

¹⁰ S. Mittman, *Beiträge zur Siedlungs- und Territorialgeschichte des nördlichen Ostjordanlandes* (Wiesbaden, 1970), Pp. 256-264.

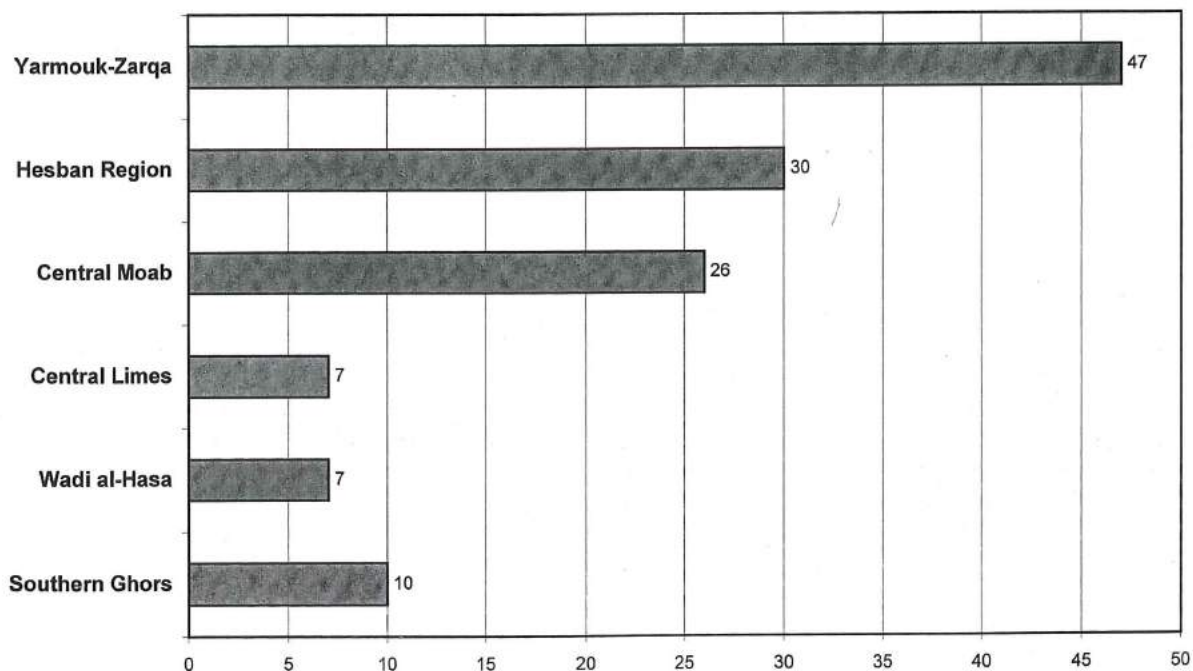
¹¹ R. D. Ibach, Jr. *Archaeological Survey of the Hesban Region: Catalogue of Sites and Characterizations of Periods: Hesban 5* (Andrews University: Berrien Springs, MI, 1987), Pp. 174-183.

¹² J. Maxwell Miller (ed.), *Archaeological Survey of the Kerak Plateau* (Atlanta: Scholars Press, 1991).

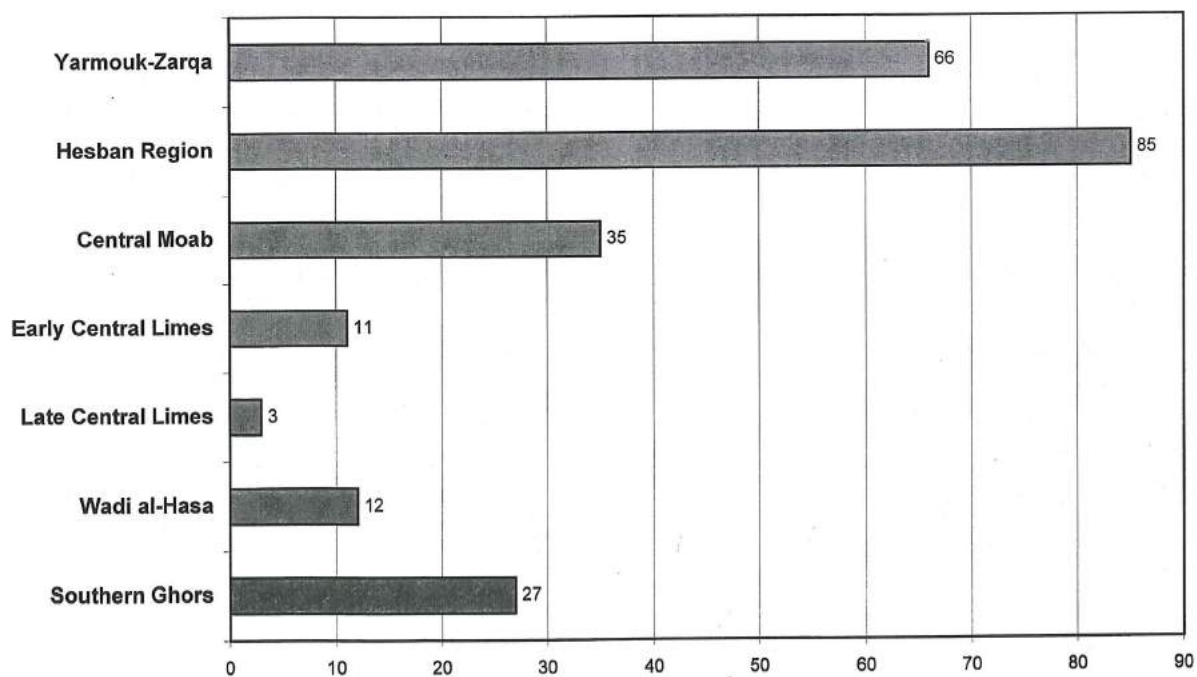
¹³ F. L. Kouchy ("Survey of the Limes Zone"), pp. 41-106 and V. A. Clark ("The Desert Survey") pp. 107-164 in S. T. Parker (ed.), *The Roman Frontier in Jordan* (Oxford, 1987).

¹⁴ B. MacDonald, *The Wadi el-Hasa Archaeological Survey 1979-1983, West Central Jordan* (Waterloo, Ontario, 1988), Pp. 190-249.

LATE ROMAN SETTLEMENT PATTERNS (% of Sites)



BYZANTINE SETTLEMENT PATTERNS (% of Sites)



northeastern 'Arabah.¹⁵ Some 240 sites were recorded, of which only 24 (10%) had Roman pottery and 64 Byzantine (27%). The rise in Byzantine sites in the 'Arabah is also a qualitative one, as demonstrated by the current Wādī Faynān project, which has yielded important evidence from the fifth and sixth centuries from ancient Phaeno, a Byzantine penal colony, and the extensive Byzantine cemetery in the aṣ-Ṣāfi region.¹⁶ For the area further south, surveys have been less extensive and coordinated, but the impression is that the plateau and Hisma desert to the south are dominated by Nabataean sites, but with a healthy proportion of Roman and Byzantine sites comparable to other regions.

The results of these large scale surveys are then mixed. Between the Yarmūk River and Wādī al-Ḥasā, there is a evidence for a sizeable population in the Roman and Byzantine era. However, east of central Moab and south of Wādī al-Ḥasā, there appears to be a significant decline in the Late Roman period (the second and third centuries), followed by a slight increase in the Early Byzantine period (fourth and fifth centuries), and a dramatic decline at least for the central *limes Arabicus* zone in the Late Byzantine period (sixth and seventh centuries). Nevertheless, caution should be exercised before taking these results at face value. The tabulation of sites includes everything from sherd scatters to villages, and leaves the size of the majority of the sites undefined. Inter-site artifact scatters may also only represent urban-derived refuse included with manure and compost used in fertilizing fields.¹⁷ Moreover, the ceramic typology utilized by most of the surveys is mainly dependent on the Ḥisbān excavations, where the implication for more remote regions is limited. This may account for the majority of the sherds collected in the surveys remaining unidentified. At any rate, excavations frequently produce results entirely different than the surface pottery collected.¹⁸ Finally, a decline in the number of sites for any period also may only reflect shifts in the population to another region. For example, R. Canova collected Greek funerary inscriptions from 29 villages in the al-Karak region which date across the fifth and sixth

centuries, but are particularly abundant for the latter sixth century, and even extend into the seventh century and later, with the latest dated to 736 and 785. The finds at Umm ar-Raṣāṣ cut across the same chronological period, demonstrating continuity from late antiquity into the early Islamic era.¹⁹ Seeming declines in population may then only represent a migration into a different region. These mitigating factors diminish any demographic conclusions based purely on the survey data.

Strategies and Paradigms

For future efforts, the most pressing need is for a strategy to utilize in interpreting the survey results. Comparative models are needed for understanding the complexities of settlement patterns. Such material is at hand, as field surveys and "landscape" archaeology are currently in vogue in classical archaeology throughout the Mediterranean. The shift has been away from the urban-centric view of the ancient world promoted by Moses Finley, to the countryside.²⁰ These efforts have provided some basis for understanding demographic trends and the organization of territory, including land use, surplus production, and natural resources. They have also resulted in challenges to the standard orthodoxy of an economic decline in late antiquity.²¹ A few illustrations will have to suffice.

1. GREECE. Although the "new wave" of multi-period, region surface surveys began about the same as those in Jordan, they have achieved a maturity that exceeds that of other regions.²² Partially, this is the result of the thousands of excavations conducted in Greece, providing a refined diachronic database for the interpretation of surface finds. But these systematic intensive surveys have also been of long duration rather than brief two or three year surveys, permitting analysis of changes in landscapes on a smaller level.²³ Drawing from the results of these projects, Susan Alcock's historical reconstruction of the Roman rural economy is particularly noteworthy. What she observed is a progressive abandonment of small rural sites on the mainland and islands during the late Hel-

¹⁵ B. Macdonald, *The Southern Ghors and Northeast 'Arabah Archaeological Survey* (Sheffield, 1992), Pp. 89-97.

¹⁶ For Wādī Faynān, see A. McQuitty *et al*, *Levant* 30 (1998) Pp. 1-83, and for Ghawr aṣ-Ṣāfi, K. D. Politis, *AJA* 103 (1999) Pp. 518-520.

¹⁷ See T. J. Wilkinson, "Extensive Sherd Scatters and Land-Use Intensity: Some Recent Results," *Journal of Field Archaeology* 16 (1989) Pp. 31-46.

¹⁸ For two recent examples, see E. B. Banning, "Highlands and Lowlands: Problems and Survey Frameworks for Rural Archaeology in the Near East," *BASOR* 301 (1996), Pp. 25-45, and P. Bienkowski *et al*, "Soundings at Ash-Shorabat and Khirbet Dubab in the Wādī Hasa, Jordan: The Stratigraphy," *Levant* 29 (1997), Pp. 41-70.

¹⁹ R. Canova, *Iscrizioni e Monumenti Protocristiani del Paese di Moab* (Roma: Città del Vaticano, 1954), and M. Piccirillo and T. Attiyat, "The Complex of St. Stephen at Umm er-Rasas-Kastron Mefaa," *ADAJ* 30 (1986) 341-351.

²⁰ See especially J. Lloyd, "Forms of rural settlement in the early Ro-

man Empire," in *Roman Landscapes: Archaeological Survey in the Mediterranean*, ed. G. W. Barker and J. A. Lloyd (London, 1991), Pp. 233-240.

²¹ See especially P. Garnsey, "Prolegomenon to a Study of the Land in the Later Roman Empire," *Energieia: Studies on Ancient History and Epigraphy Presented to H. W. Pleket* (Amsterdam, 1996) 135-153 = *Cities, Peasants, and Food in Classical Antiquity* (Cambridge, 1998) 151-165.

²² See J. F. Cherry, "Regional Survey in the Aegean: The 'New Wave' (and After)," *Beyond the Site: Regional Studies in the Aegean Area*, ed. P. N. Kardulias (Lanham, 1994), 91-112, and T. E. Gregory, "Intensive Archaeological Survey and Its Place in Byzantine Studies," *Byzantine Studies* 13 (1986), Pp. 155-175.

²³ J. Bintliff, "The History of the Greek Countryside: As the Wave Breaks, Prospects for Future Research," in *Structures rurales et sociétés antiques*, ed. P. Doukellis and L. Mendotti (Besancon, 1994), Pp. 7-15.

lenistic period and early Roman era, i.e. between 200 BC and 200 AD, that is simultaneous with a marked increase in the size of individual holdings and a marked nucleation of settlements in certain prime regions.²⁴ By emphasizing the continuity and size of sites, a change is detected in the pattern of land tenure. The signs are the shift from rural to urban, the growth of a few urban centers while others declined, and the creation of villas and large estates by local pro-Roman elites. In sum, what appears on the surface to be a demographic decline really represents only a population shift to urban centers by a marginalized peasantry that had become "economically more vulnerable under the empire."²⁵ As Alcock further notes, "Roman imperialism in Greece may not have been overtly *interventionist*, [but] it was nonetheless highly *intrusive*."²⁶ This study of the impact of Roman rule on a provincial culture may form a fruitful line of inquiry for interpreting the data base accumulating from the Jordanian surveys.

2. SYRIA. In northern Syria, the limestone hills stretching between Aleppo and Apamea contain some 700 Byzantine villages from antiquity, the so-called "dead cities." According to 19th century explorers, they were among the casualties of the Islamic conquest in the seventh century.²⁷ In the 1950s, George Tchalenko's extensive survey of the region classified the villages into various categories--industrial centers, small market towns, clusters of villas, and free peasant landowners--all engaged primarily in the production of olive oil until the Persian invasions in the early seventh century.²⁸ Tchalenko's impressive work was based on survey and epigraphy, without excavation. In recognition of this deficiency, Georges Tate and Jean-Pierre Sodini began excavations at D  h  s in the center of the region in the 1970s, which Tchalenko had previously identified as a flourishing market town. What their excavations revealed instead was that the buildings were primarily domestic quarters for stockbreeders and farmers.²⁹ Further examination of more than a hundred other villages in the region led to similar conclusions.³⁰ Tchalenko's inns, bazaars and craft shops were discovered

to be mainly houses. The villages also existed in relative security without any walls, growing steadily from the first through the mid third centuries, and expanding even afterwards before disappearing in the ninth century. Excavations of key sites led to the dismissal of the theories of an eclipse of the settlements from invading Persians or Islamic conquerors.

3. EGYPT. The evidence here is not from surveys, but from the papyri, which provide the documentation lacking for other areas of the empire for land use. The upper class landowners controlled the vast majority of the empire's wealth, with their estates employing large numbers of tenants and agricultural laborers and producing much of the agriculture that was the dominant industry in the Roman economy.³¹ For example, at Oxyrhynchus in Middle Egypt during the early Roman era, privately owned land increased, with small landowners owning small tracts in scattered uncontiguous geographical locations, and even wealthy landowners with larger tracts possessing some small and scattered parcels.³² By the time of Diocletian, the trend was for a permanent agricultural work-force living on subsistence wages on larger estates operated by the so called magnates of the "great domains."³³ The transition is marked by the huge estate of Aurelius Appianus, an Egyptian aristocrat of the equestrian class in the third century AD, which was divided among 30 villages in the Arsinoite nome in the Fayum. The archive of his manager Heronios from Theadelphia represents over a thousand papyri, the largest of the Roman period in Egypt, and reveal that he also managed estates for other prominent aristocrats from Alexandria, linking distant provincial magnates with the rural labor force.³⁴ In fact, one of the most noticeable changes in Egypt is the increased number of large land-owners of "great domains" from the third to the sixth centuries.³⁵ Similar trends may be sought elsewhere in the Levant.

Furthermore, the Egyptian papyri provide statistical evidence for demographic trends and changes in Egyptian society which have applicability elsewhere in the Near East. For example, Roger Bagnall and Bruce Frier have examined more than 300 census documents from Egypt,

²⁴ See now the map in J. Bintliff, "Regional Survey, Demography, and the Rise of Complex Societies in the Ancient Aegean: Core-Periphery, Neo-Malthusian and Other Interpretative Models," *Journal of Field Archaeology* 24 (1997), Pp. 16.

²⁵ Susan E. Alcock, *Graecia Capta: The Landscapes of Roman Greece* (Cambridge, 1993), Pp.113.

²⁶ Alcock, *Graecia Capta*, 171.

²⁷ For an excellent summary of the research see C. Foss, "The Near Eastern countryside in late antiquity: a review article," in *The Roman and Byzantine Near East: Some Recent Archaeological Research* (Ann Arbor, 1995), Pp. 213-234.

²⁸ G. Tchalenko, *Villages antiques de la Syrie du nord* (Paris, 1953-58).

²⁹ J.-P. Sodini *et al*, "D  h  s (Syrie du nord), Campagnes I-III (1976-78): recherches sur l'habitat rural," *Syria* 57 (1980), Pp. 1-304.

³⁰ G. Tate, *Les campagnes de la Syrie du nord I* (Paris, 1992).

³¹ D. Kehoe, *Management and Investment on Estates in Roman Egypt during the Early Empire* (Bonn, 1992).

³² J. Rowlandson, *Landowners and Tenants in Roman Egypt. The Social Relations of Agriculture in the Oxyrhynchite Nome* (Oxford 1996).

³³ J. Gasco, "Les grand domaines, le cit   et l'  tat en Egypte byzantine (Recherches d'histoire agraire, fiscale et administrative)," *Travaux et M  moires* 9 (1985), Pp. 1-90.

³⁴ D. Rathbone, *Economic Rationalism and Rural Society in Third-Century A.D. Egypt: The Heronios Archive and the Appianus Estate* (Cambridge, 1991).

³⁵ R. S. Bagnall, *Egypt in Late Antiquity* (Princeton, 1993), Pp. 133-138 and 159-160.

the best demographic data available anywhere in antiquity. The documents extend from AD 11/12 to the last known census of 257/258, but 90% of the censuses are between the reign of Trajan and the Severan dynasty. Their analysis of the documents has led to increased respect for the impact of the Antonine plague, almost reduced to mythological proportions by previous scholars.³⁶ No one can dispute the impact of the later Justinian plague of 541, which arose in Egypt and later spread throughout the Levant, as well as the western Mediterranean. It even now seems possible that both the Antonine plague and that of Justinian may have appeared in South Arabia prior to their impact on the Mediterranean world.³⁷ After the Justinian plague struck the Levant, it appears to have erupted periodically in fifteenth year intervals across the Mediterranean into at least the seventh century, with an impact on even Ireland and England.³⁸ Future palaeopathological analysis for epidemic diseases in skeletal remains of the Roman and Byzantine period in Jordan should consider the effects of these plagues on the population.

These examples of landscape analysis illustrate the need in Jordan for more intensive, and less extensive survey, with excavations and sondages of select sites as test cases. The tabulation of surface survey data should be used to achieve more than just a simple depiction of the distribution of sites in any period. Priority should be placed on a search for the fundamental structures of ancient society. While there may be enormous differences between Arabia and provinces with the political prominence of Greece, the strategic importance of Syria, or the economic importance of Egypt, this should not prohibit the search for the local Transjordanian response to Roman rule in future investigations. In particular, some of the following typical features of the rural landscape found elsewhere in the Roman empire should be given further consideration.

Civic Territorial Markers

Investigation of the Roman road system in the region has helped expose the fundamental provincial and territorial divisions of the region. After the annexation of the province in 106, the *Via Nova Traiana* was constructed between 111-114, connecting the Arabian capital at Bostra

in the Ḥawrān to Aila on the Gulf of 'Aqaba, a *finis Syriae usque ad mare rubrum*, some 430 km in length. This central transportation spine cut directly across the major dividing wadi systems, helping to unite the new province. More than 200 milestone inscriptions from Trajan to Julian document the itinerary and path of this route. They also reflect the territorial divisions that dominate the landscape. Initially, it is clear, Petra served as the *caput viae* for the whole route of the major Trajanic road. However, in 181 under Commodus, at least as far as the XLVIII Roman mile south of Bostra, the Arabian capital replaced Petra as the *caput viae*.³⁹ Rather than a reflection of a change in the original system, this may only designate the extensive territory of the capital city. In similar fashion, the milestones on the Roman road between Gerasa (modern Jarash) and Adraa indicate that the XLVI mile from Bostra, just nine miles from Gerasa, marked the southern boundary of the immense territory of Bostra.⁴⁰ For the Trajanic road connecting the two major Decapolis cities of Gerasa and Philadelphia, the milestones are inscribed according to the boundaries of the respective cities: the XII mile south of Gerasa and the XV north from Philadelphia separated their territories.⁴¹ Afterwards, the city territories begin to mark the distances on the milestones along the *Via Nova Traiana*, just as they had elsewhere in the province. To the west, milestones on the Roman road to Pella in the Jordan Valley indicate that Jarash's territory extended to the XII mile.⁴² The boundaries of the other Decapolis cities are not known, but this triad provides some indication of what may have existed elsewhere. Similar clues can be deduced from the milestones along the *Via Nova Traiana* between 'Ammān (Philadelphia) and Petra further south. South of Mādabā, milestones indicate the VIII, XI, XIII, XX and XXI miles from the town until the descent into Wādī al-Mūjib.⁴³ On the southern banks of the great divide of al-Mūjib, the milestones marked from Rabba begin, with the recent discovery of the XI at Abū Trābah, while at al-Muta approaching Wādī al-Ḥasā, the other great dividing line of Transjordan, a milestone marks the XIII mile south of Rabbah, dated like that marking its northern limit to the reign of Pertinax or 193 AD.⁴⁴

At this point such city markers virtually disappear, but

³⁶ R. S. Bagnall and B. W. Frier, *The Demography of Roman Egypt* (Cambridge, 1994) 173-178; a view shared recently by D. W. Rathbone, "Villages, Land and Population in Graeco-Roman Egypt," *Proceedings of the Cambridge Philological Society* 36 (1990), Pp. 114-119, and R. P. Duncan-Jones, "The Impact of the Antonine Plague," *Journal of Roman Archaeology* 9 (1996), Pp. 108-136.

³⁷ C. Robin, "Guerre et épidémie dans les royaumes d'Arabie du sud, d'après une inscription datée (IIe siècle l'ère chrétienne)," *CRAI* (1992), Pp. 215-234.

³⁸ See L. I. Conrad, "The Plague in Bilād al-Shām in Pre-Islamic Times," *Proceedings of the Symposium on Bilād al-Shām during the Byzantine Period II*, ed. M. Bakhit and M. Asfour (Amman, 1986), Pp. 142-163, and J. R. Madicott, "Plague in Seventh-Century England," *Past & Present* 156 (1997), Pp. 7-54.

³⁹ T. Bauzou, "Le secteur nord de la via nova en Arabie de Bostra à Philadelphia," in *Fouilles de Khirbet es-Samra en Jordanie I*, ed. J.-B. Humbert and A. Desremaux (Turnhout: BREPOLS, 1998) 242.

⁴⁰ S. Mittmann, "The Roman Road from Gerasa to Adraa," *ADAJ* 11 (1966) 65-87 = *ZDPV* 80 (1964) 113-136.

⁴¹ A.-M. Rasson-Seigne and J. Seigne, "Notes préliminaires à l'étude de la voie romaine Gerasa/Philadelphia," *ADAJ* 39 (1995), Pp. 193-210, J. Seigne and S. Agusta-Boularot, "Milliaires anciens et nouveaux de Gerasa," *Mélanges de l'École Française de Rome antiquité* 110 (1998), Pp. 261-295, and J. Seigne, "Les limites orientale et méridionale du territoire de Gerasa," *Syria* 74 (1997), Pp. 121-138.

⁴² Thomsen, *ZDPV* 40 (1917) nos. 221-222.

⁴³ Thomsen, *ZDPV* 40 (1917) nos. 116, 118-119, 125-126.

⁴⁴ Thomsen, *ZDPV* 40 (1917) no. 185.

there are indications the system continued. At 52 km and at 90 km north of Petra along the *Via Nova Traiana*, two fragmentary boundary markers are found, but the names of the respective villages are either missing or illegible.⁴⁵ The location of one is just south of Wādī al-Ḥasā, and the other near ash-Shawbak. The Peutinger Table indicates that the village of Thornia (Thawāna) and Negla (Nijl) were the major road stations in the region, and either could be the unidentified villages mentioned on the milestones. Of course, the region further south is dominated by Petra, the former capital of the Nabataean kingdom, and it may be one of the intended villages. Further south, none of the milestones divulge city territories, but it is likely that Petra dominated the plateau up to the Ḥismā desert. The dominance of al-Ḥumayma and Ayla (al-'Aqaba) in the desert suggest that either or both were names on milestones in that region. In essence, city territories from north to south, seem to command the landscape of Transjordan. What the relationship of the urban centers was to their rural regions is difficult to determine without documentation, but the tendency has been to emphasize the extension of the urban aristocratic elite into the countryside by expanding their wealth by rents and extracting surpluses from the rural hinterland.⁴⁶ Whatever the case, the connections between the city and countryside is apparent.

Centuriation

The system of land-division known as "centuriation" is strongly linked to the foundation of veteran colonies and the allocation of land to the new settlers. The land grants for these discharged veterans were arranged in a grid pattern around two intersecting lines. Aerial photographs have revealed such arrangements in the environs of Carthage, Italy, Spain and France.⁴⁷ In the Levantine Near East, such field divisions have appeared in just such places as one would suspect, at various veteran settlements: the central Biqā' near Berytus and Heliopolis in Lebanon

where the *Colonia Augusta Felix Iulia* was founded in the Augustan era;⁴⁸ at Laodicea on the Sea near Antioch and the Severan *colonia* at Emesa (Ḥums) in Syria;⁴⁹ and at Ptolemais ('Akkā) in Palestine, where the *Colonia Claudia Felix* was founded in the reign of Claudius.⁵⁰ But other regular field-system patterns also appear elsewhere. At Damascus, based on the FFL aerial photographs of the 1930s, before the post WWII modifications of the structure of these cities took place, two different plans have been observed, one of rectangles in the area to the north/northeast of the city, and another grid of squares to the west and southeast of the city. The former may be a Hellenistic development, but the latter fits the early Roman imperial grid pattern of squares of 20 actus x 20 actus or 200 iugera (50 ha).⁵¹ Such regular field-divisions are probably the result of large-scale veteran settlement, the present evidence for which is fairly minimal in Arabia. The study of the aerial photography for Jordan currently being conducted by David Kennedy may reveal more, but it is a matter that deserves systematic investigation.

For the province of Arabia, the only such grid patterns detected are in the Syrian Ḥawrān. At the capital of Bosra, where the legionary camp of the *III Cyrenaica* was located, regular property divisions (144 x 96 m) have been observed in the west and southwest within the city and its suburbs, and east of the city in the countryside towards Salkhad where there are 532m sq regular plots, just as there are at Damascus, Aleppo and Ḥamāh.⁵² Nearby, at Khirbat Qumayra, just west of Imtān, some 10 km south/southeast of Ṣalkhad, post WWII RAF aerial photos disclose a regular pattern of thin rectangles whose shape and size (40 m x 300 m) contrast with the normal centuriation square plan of 706-710m². But the pattern is peculiar, standing in marked distinction from the irregular fields of the surrounding area and elsewhere in the Ḥawrān.⁵³ The same pattern has been observed just north of Imtān.⁵⁴ If this system is the product of military settlement, the candidates for the discharged veterans provided with the land

⁴⁵ M. Sartre, *IGLS XXI/II IV* (1993) nos. 116 and 118.

⁴⁶ C. R. Whittaker, "Do theories of the ancient city matter?," *Urban Society in Roman Italy*, ed. T. Cornell and K. Lomas (New York, 1995), Pp. 9-37, provides a recent critique of the various models for interpreting the role of cities.

⁴⁷ For a general discussion see, J. Bradford, "Roman Centuriation: A planned Landscape," in *Ancient Landscapes: Studies in Field Archaeology* (London, 1957), Pp. 145-216, and O. A. W. Dilke, *The Roman Land Surveyors: an Introduction to the Agrimensores* (Newton Abbot, 1971).

⁴⁸ L. Marfoe, *Between Qadesh and Kumidi: A History of Frontier Settlement and Land Use in the Biqa'* (Ph.D. dissertation, University of Chicago, 1978), and "Empire and Ethnicity in Syrian Society: 'From Archaeology to Historical Society' Revisited," in *Archéologie au Levant: Recueil à la mémoire de Roger Saidah* (Lyon: Maison de l'Orient, 1982), 470.

⁴⁹ J. Sauvaget, "Le plan de Laodicea sur mer," *Bulletin d'Études Orientales* 4 (1934) 81-1113, and W. J. Van Liere, "Ager Centuriatus of the Roman Colonia of Emesa (Homs)," *Annales Ar-*

chéologiques Syriennes 8-9 (1958-59), Pp. 55-58.

⁵⁰ S. Applebaum, "The Roman Colony of Ptolemais-Akko," in *Greece and Rome in Eretz Israel*, ed. A. Kasher et al (Jerusalem, 1990), Pp. 135-140.

⁵¹ M. Dodinet, J. Leblanc, J.-P. Vallat and F. Villeneuve, "Le paysage antique en Syrie: l'exemple de Damas," *Syria* 67 (1990), Pp. 339-355; but G. Tate, "A propos des cadastres romains du Nord de la Syrie," in *Structures rurales et sociétés antiques*, ed. P. N. Doakellis and L. G. Mendoni (Besançon, 1994), Pp. 443-451, argues against any Hellenistic system in Syria.

⁵² F. Villeneuve in *Hauran I*, ed. J.-M. Dentzer (Paris, 1985), 128, and M. Dodinet, J. Leblanc, and J.-P. Vallat, "Étude morphologique des paysages antiques de Syrie," in *Structures rurales et sociétés antiques*, ed. P. N. Doakellis and L. G. Mendoni (Besançon, 1994), Pp. 427-442.

⁵³ D. Kennedy, "Aerial Photography: Ancient Settlements in Syria," *Popular Archaeology* (September 1985), Pp. 42-44.

⁵⁴ Villeneuve in *Hauran I* (Paris, 1985), 128 with pl. VIIIb.

grants are not wanting. The *cohors I Augusta Canathenorum* was recruited in the region, and inscriptions indicate that ethnic units of Thracians, Illyrians, and *Gothi gentiles* were once stationed in the area. But such regular field patterns are unknown in Transjordan, according to David Kennedy, who is presently engaged in the close scrutiny of the available aerial photographs for the region.⁵⁵ But this is an on-going project, and further scrutiny of the Jordanian landscape may yield such patterns.

In fact, several unusually regular ancient-field patterns have been observed in Jordan. In the environs of Umm al-Quṭṭayn in northern Jordan, some narrow parallel or rectangular strips of fields have been signaled, but they are of varying widths.⁵⁶ Far more impressive is the regular field pattern that appears on RAF photos from the 1930s at aṭ-Ṭilāḥ about 25 km south of the Dead Sea on the eastern side of Wādī 'Arabah. Adjacent to the well preserved small fort (40 x 40m), reservoir, and aqueduct system is a regular pattern of square terraced walls. Glueck found exclusively Nabataean sherds at the site, but later investigations of the site by Burton MacDonald and myself have produced both Late Roman and Byzantine ware.⁵⁷ The site seems to be identified with *Toloha*, where the *Ala Constantiana* was stationed according to the *Notitia Dignitatum* (Or. XXXIV.34). A large village and cemetery nearby, where Byzantine sherds have been connected, enhances the identification. The plots are smaller than those regularly assigned veterans, but the regular arrangement is peculiar. It is well to remember that such regular field divisions could be the product of a fiscal policy involved in rural development as seems to be the case in Roman Syria.⁵⁸

In this regard, the most dramatic case is the effort of the Tetrarchic land surveyors, who left evidence of their work scattered across eastern Turkey, Syria, the Golan Heights and al-Ḥūlah Valley in Galilee, and Egypt.⁵⁹ What is particularly striking is the activity of the Tetrarchic censitores demarcating land in the Syrian southern

Ḥawrān, skirting the province of Arabia.⁶⁰ Yet no evidence exists of their effort in Arabia, either in the area of Bostra or the other major cities of Transjordan from Gerasa to Petra. This seems strange, since it appears that the enterprise comprised the entire Roman Near East. For example, the same *censitor*, Aelius Statutus was active in Damascus, Gaulanitis, and al-Ḥūlah Valley, and another *censitor*, Julius Septimius Sabinus was active in Syria and the Arsinoite nome in Heptanomia in Egypt.⁶¹ But neither of the two cadasters known from northern Jordan appear to reflect the activity of the Tetrarchic *censitores*.⁶² This lacuna in Arabia would seem to be purely accidental, and perhaps eliminated by some future epigraphic discovery.

Rural Markets

Urban and rural markets and periodic and annual commercial fairs are a well documented phenomenon across the empire.⁶³ It has been observed that "of all aspects of Roman commerce there is none so neglected as the arrangements for markets within a short radius."⁶⁴ The recent discovery of the *macellum* at Gerasa, known previously only from dedicatory inscriptions of the Hadrianic era, provides now an excellent example of an urban market in Arabia.⁶⁵ Rural markets, organized around central towns and their satellite villages, and usually located on or near important junctions of local roads, are also well known. According to Libanius (Or. 11.230), in the vicinity of Antioch, large and well populated villages (*kōmai*), exchanged with one another their goods and crafts through festivals (*panēgyreis*), having "little need of the city" (*mikra tēs poleōs chrēzousai*), because of their exchange among themselves." This depiction of economic self-sufficiency in rural villages may seem to be merely a *topos* for the "glorification of the country life," but Brent Shaw has demonstrated that in at least Roman North Africa, the rural markets were strikingly not integrated into the urban market centers.⁶⁶ At such markets, farmers and

⁵⁵ D. Kennedy, "Aerial Archaeology in Jordan," *Levant* 30 (1998), Pp. 91-96.

⁵⁶ D. Kennedy, H. MacAdam, and D. Riley, "Preliminary Report on the Southern Hauran Survey, 1985," *ADAJ* 30 (1986), Pp. 151-153 with fig. 2; cf. H. MacAdam, *The Byzantine and Early Islamic Near East II* (1994) 61, n. 68.

⁵⁷ D. Kennedy and D. Riley, *Rome's Desert Frontier from the Air* (Austin: University of Texas, 1990), Pp. 205-207. For the pottery see Graf, "Wādī 'Arabah Survey (Amman: Department of Antiquities, 1980) and Macdonald, *The Southern Ghors and Northeast 'Arabah Archaeological Survey* (1992) P. 89 and P. 105.

⁵⁸ G. Tate, "The Syrian Countryside during the Roman Era," in *The Early Roman Empire in the East*, ed. S. E. Alcock (Oxford: Oxford, 1997), Pp. 60-62.

⁵⁹ See F. Millar, *The Roman Near East 31 BC-AD 337* (Cambridge: Harvard, 1993), Pp. 535-544, for the details.

⁶⁰ M. Sartre, "Nouvelles bornes cadastrales du Hauran sous la Tétrarchie," *Ktéma* 17 (1992), Pp. 111-131.

⁶¹ Millar, *Roman Near East*, 536 [Aelius Statutus]; A. H. M. Jones, J.

Martindale and J. Norris, *The Prosopography of the Later Roman Empire*, vol. 1 (Cambridge, 1971), P. 794 [Julius Septimius Sabinus 17].

⁶¹ E. Littmann, *Princeton Archaeological Expedition to Syria IIIA* (Leiden, 1907) no 28 (Sama) and SEG 17 (1960) no. 760 (Jabin).

⁶³ See J. M. Frayne, *Markets and Fairs in Roman Italy. Their Social and Economic Importance from the Second Century BC to the Third Century AD* (Oxford, 1993), and L. De Ligt, *Fairs and Markets in the Roman Empire: Economic and Social Aspects of Periodic Trade in a Pre-Industrial Society* (Amsterdam, 1993), D. Sperber, *The City in Roman Palestine* (Oxford, 1998) Pp. 9-47.

⁶⁴ D. Peacock, *Pottery in the Roman World* (New York/London, 1982), P. 156.

⁶⁵ A. Uscatescu and M. Martín-Bueno, "The *Macellum* of Gerasa (Jerash, Jordan): From a Market Place to an Industrial Area," *BASOR* 307 (1997), Pp. 67-88, and T. Marot, *Las monedas del Macellum de Gerasa (Yaras, Jordania)* (Madrid, 1998).

⁶⁶ B. Shaw, "Rural Markets in North Africa and the Political Economy of the Roman Empire," *Antiquités Africaines* 17 (1981), P. 67.

pastoralists could exchange common goods, and village craftsmen sell their wares. Most villagers would have their common needs satisfied in this fashion, especially those who lived some distance from major urban markets.⁶⁷ These locals could purchase here the necessary clothing, pottery, metal or wood implements, salt, and other items to satisfy their basic needs, and perhaps even a few luxuries like gold and silver jewelry for a few. Slaves, land, and animals could also be sold in such locations. Estate owners often provided the location for the event, clearing a space of their property for such exchanges. Any doubts about the realistic nature of this picture need only consider the mounting evidence for the monetarization of the rural economy and the stratification of peasant society.⁶⁸ Nor should the volume of peasant demand, who represented more than 80% of the total population of Roman empire, be underestimated.

Of course, the fairs (*panygereis* or *nundinae*) were of greater magnitude, attended by both local population and foreigners. These periodic events attracted itinerant merchants, peddlers and caravans from afar who traveled from fair to fair. Many of these merchants received a tax or customs exemption from the emperor, since their large-scale trade involved expensive items. In the fourth century, Ammianus mentions the annual fair at the town of Batne, just east of the Euphrates from Zeugma, where crowds gathered to purchase wares from India and Persia (14.3.3). Shortly afterwards, another Syrian describes the festival at Immae near Antioch, where merchants from afar gathered and attracted a crowd "beyond number" (Theodoretus, *Hist. rel.* 7 = PG 82.1365). Such large gatherings of locals and foreigners could arouse the suspicions of the authorities, especially in the frontier provinces, where security could be threatened. Consequently, legal permission was required before holding such affairs, and supervision and monitoring must have been demanded during the events. Since long-distance trade was conducted by ship, many of the fairs were located in port cities along the Mediterranean coast from Gaza to Tyre, but others were inland. For example, at Botnah near al-Khalil/Hebron in Palestine a famous fair was located. Herod is known to have enclosed the location with a mas-

sive wall, and after its destruction in the Bar Kokhba revolt, it was rebuilt by Hadrian and Constantine later added to it a church. Numismatic evidence from the site indicates that it flourished throughout the Roman and Byzantine periods, with its inter-regional nature reflected by coins from Egypt, Syria, Asia Minor, Greece, Italy, Spain and Gaul.⁶⁹ The location of such open-air fairs and markets may be difficult to determine in the absence of any literary material such as the Rabbinical sources that attest to Botnah, but, as Ramsay Macmullen has suggested, the archaeologist "might find at a cross-roads an area littered with coins, pottery, and other small objects attesting to the presence of crowds of people."⁷⁰ Perhaps more specific is Shaw's suggestion that rural markets should be sought along regularly used routes connecting disparate zones, such as the frontiers zones, rather than villages or small towns. The preference is for a neutral ground for rural periodic markets, a place juxtaposed between adjacent populations in a kind of "no man's land."⁷¹ It is also evident that such affairs were of pre-Roman vintage. In fact, our first literary reference to the Nabataeans refers precisely to their participation in just such a regional fair in the early Hellenistic period (Diodorus Siculus 19.95). It is a reminder that rural markets began in the East. In fact, both the Latin terms *mercatus* and *macellum* are of Semitic derivation, suggesting that the phenomenon was imported to the West from the East.⁷²

Villas

Large estates are a typical feature of the Roman and Byzantine landscape in the western provinces and Greece.⁷³ Thousands have been excavated in Britain, Belgium, Gaul, Spain, the Upper Danube and Rhineland, as well as Italy. In contrast, villas appear to be noticeably rare in the Near East.⁷⁴ Part of the reason for their seeming absence is the tyranny of an overly-precise definition that emphasized only the luxury and leisure aspects of the Italian rural complexes, neglecting their productivity (*fructuar-ia*). Emphasis on the sterility of the *villae* in the Latin literary tradition also contributed to the perception that villas were "a little island of urban uselessness marooned in the real countryside."⁷⁵ The reality is that production of a

⁶⁷ A. H. M. Jones, "The Economic Life of the Towns of the Roman Empire," *The Roman Economy* (Oxford, 1974), P. 38.

⁶⁸ L. de Ligt, "Demand, Supply, Distribution: The Roman Peasantry between Town and Countryside: Rural Monetization and Peasant Demand," *MBAH* 9 (1990), Pp. 24-56, and "The Roman Peasantry: Demand, Supply and Distribution between Town and Countryside. II: Supply, Distribution and a Comparative Perspective," *MBAH* 10 (1991), pp. 33-77.

⁶⁹ I Magen, "Mamre," *The New Encyclopedia of Archaeological Excavations in the Holy Land*, ed. E. Stern (Jerusalem, 1993), III: 939-942; cf. Z. Safrai, *The Economy of Roman Palestine* (New York/London, 1994), Pp. 254-256.

⁷⁰ R. Macmullen, "Market-Days in the Roman Empire," *Phoenix* 24 (1970), Pp. 33; cf. K. W. Harl, "Coins in Taxes and Markets of the Roman World," *Ancient World* 27/2 (1996), Pp. 197-204.

⁷¹ Shaw, *Antiquités africaines* 17 (1981), Pp. 40-41.

⁷² L. DeMyer, "L'etymologie de *macellum*, marché," *L'Antiquité Classique* 31 (1962) 148-52, and E. Gabba, "Mercati e fiere nell'Italia romana," *Studi Classici e Orientali* 24 (1975) 141-160 at 145.

⁷³ J. Percival, *The Roman Villa: An Historical Introduction* (Berkeley, 1976) and B. Bergmann, "Visualizing Pliny's Villas," *JRA* 8 (1995), Pp 406-420.

⁷⁴ J. J. Rossiter, "Roman villas of the Greek east and the villa in Gregory of Nyssa Ep. 20," *JRA* 2 (1989), Pp. 101-110, and H.-P. Kuhnen, *Palästina in griechisch-römischer Zeit* (Munich, 1990), Pp. 241.

⁷⁵ N. Purcell, "The Roman villa and the landscape of production," *Urban Society in Roman Italy*, ed. T. Cornell and K. Lomas (New York: St. Martin's Press, 1995), Pp. 173, a remarkably perceptive essay.

surplus and exploitation of the countryside was just as much a part of their essential function as the elements of privacy. Of course, the large villa estates with their luxurious baths, porticoes and mosaics that were common in the West is unlikely to be found in the East. In fact, there is a wide variety of types even in the West, reflecting regional diversity and the tastes of the indigenous local elite society.⁷⁶ It is now recognized that a provincial villa was not a "slavish reproduction of the Italian one," but one exhibiting its own unique properties.⁷⁷ Those in the East took on a different form than elsewhere, where there was already a long tradition of the Oriental *paradeisos*, with its productive gardens and water resources.

In the Levant, many of the villas are linked to nucleated villages and cities, intermingled among the farmsteads in the nearby surrounding suburbs. They are also typically associated with garden estates and plantations for supplying food for the owner's household. Libanius indicates that the wealthy citizens of Antioch escaped in the summer to their villas in the suburb of Daphne (*Ep.* 419), where senators and emperors also erected villas. Such villas near Antioch had been excavated, as well as others before 1980 in the environs of Beirut and Baalbek in Lebanon, and Ascalon, Baysān/ Beth-Shean and Emmaus in Palestine.⁷⁸ But the list from Palestine has been significantly expanded since 1980, with Byzantine *villa rusticae* now known throughout Palestine, especially along the coastal plain northeast of Caesarea, and from Hebron to the northern Negev.⁷⁹ A number date to the early Roman era (first century BC-first century AD), including even the possibility that the settlement at Qumran was originally a *villa rustica* before its possible conversion to an Essene center.⁸⁰ These large complexes occupy several hundred yards, including adjacent industrial areas, with sometimes a fortified tower connected to the residential quarter. The estates appear to be the product of wealthy and powerful magnates, and involved a significant work-force.

The recent surveys in Jordan have revealed the in-

tensity of rural settlements, but few villas have been identified. Villeneuve has drawn attention to several *villae rusticae* in the environs of Bostra.⁸¹ There are also a number of large farm houses with towers in the area near Suwayda in the Ḥawrān, similar to those in Palestine. Other rural estates might be expected in the vicinity of the Transjordanian urban centers, Jarash, 'Ammān, Mādabā, and Petra, such as the badly destroyed large Byzantine villa complex Pam Watson discovered about 2 km north of Pella overlooking the hot springs at Wādī al-Ḥammah. It appears to be connected to the adjacent bath house structures, and produced abundant late sixth and early seventh century pottery.⁸² The identification and excavation of such sites elsewhere in Jordan should be a desideratum for the future. The focus should be as much the field system, as the palatial elements among the ruins.

Imperial Estates

It has been observed that imperial estates are spread fairly evenly around the empire,⁸³ but the documentation for the provinces in the Eastern Mediterranean is rather uneven.⁸⁴ Most are concentrated in papyrologically rich Egypt and the Hadrianic forest preserve of Phoenicia.⁸⁵ Yet, others must be scattered throughout the region. In Palestine, the royal lands of the Herodian monarchs and much of Judaea was confiscated and transformed into imperial property, beginning with the collapse of Archelaus' rule (Josephus, *AJ* 17.13.1-2 [340-44]; cf. 18.2.1 [26]), then after the First Revolt (*BJ* 7.6.6 [216]) and in the aftermath of the Bar Kokhba Revolt (*Eus. H.E.* 4.6.1). Even if much of it was later liquidated, the overwhelming impression is that large tracts of land continued to exist as crown property.⁸⁶ Some vestiges of these imperial lands still appear in Byzantine sources, such as with the abundant references to *Saltus Geraiticus* and *Saltus Constantianus*, located on the desert frontier southeast of Gaza, and protected by imperial troops, the *equites Thamudeni Illyricani* and *equites promoti Illyricani* respectively.⁸⁷ These forts of the *Limes*

⁷⁶ See now J. T. Smith, *Roman Villas: A Study in Social Structure* (New York/London: Routledge, 1998).

⁷⁷ J. Percival, "The Villa in Italy and the Provinces," *The Roman World II*, ed. J. Wacher (London/New York: Routledge & Kegan Paul, 1987), Pp. 542.

⁷⁸ See Rossiter, *JRA* 2 (1989) 102 n. 8, for a list.

⁷⁹ Y. Hirschfeld, "Farms and Village in Byzantine Palestine," *Dumbarton Oaks Papers* 51 (1997), Pp. 44-59.

⁸⁰ Y. Hirschfeld and R. Birger-Calderon, "Early Roman and Byzantine Estates near Caesarea," *IEJ* 41 (1991), Pp. 81-111; R. Donceel and P. Donceel-Voûte, "The Archaeology of Khirbet Qumran," *Methods of Investigation of the Dead Sea Scrolls and the Khirbet Qumran Site: Present Realities and Future Prospects*, ed. M. O. Wise et al (New York: The New York Academy of Sciences, 1994), Pp. 26-27, and Y. Hirschfeld, "Early Roman Manor Houses in Judea and the Site of Khirbet Qumran," *Journal of Near Eastern Studies* 57 (1998) 161-189. But cf. J. Magness, "A Villa at Khirbet Qumran?," *Revue de Qumran* 16 (1994), Pp. 397-419.

⁸¹ Villeneuve in *Hauran I* (1985), P. 76 and P. 114.

⁸² P. Watson, "Pella Hinterland Survey 1994: Preliminary Report," *Levant* 8 (1996), Pp. 69-71.

⁸³ R. MacMullen, "Two notes on imperial properties," *Athenaeum* n.s. 54, (1976), P. 19.

⁸⁴ D. J. Crawford, "Imperial Estates," *Studies in Roman Property*, ed. M. I. Finley (Cambridge, 1976), Pp. 63-64, and "Imperial Estates," *The Roman World*, ed. J. Wacher (London/New York: Routledge, 1987), II: 555-567.

⁸⁵ G. M. Parassoglou, *Imperial Estates in Roman Egypt* (Amsterdam, 1978), and J. F. Breton, *IGLS VIII/1: Inscriptions forestières du mont Liban* (Paris, 1980).

⁸⁶ S. Applebaum, "Royal and Imperial Estates in the Sharon and Samaria," *Judaea in Hellenistic and Roman Times* (Leiden, 1989), Pp. 97-110, and Z. Safrai, *The Economy of Roman Palestine* (London/New York: Routledge, 1994) 322-326.

⁸⁷ Y. Tsafirir et al, *Tabula Imperii Romani: Judaea-Palestine* (Jerusalem, 1994), Pp. 132-133, 183 s.v. Menois with 220), and see *Notitia Dignitatum*, Or. 34.19 and 22.

Palestinae suggest the possibility that military garrisons were located on imperial estates elsewhere on the eastern frontier.

For Transjordanian Arabia, there are also scattered references to imperial estates in literary sources, inscriptions and papyri. The Babatha archive mentions that the Jewess' date-grove bordered on imperial property at Zoar and the Dead Sea.⁸⁸ An earlier still unpublished Aramaic document from her archive dates to AD 99, and indicates the same imperial property formerly belonged to the Nabataean king Rabbel II.⁸⁹ There must have been a number of other such agricultural estates of the Nabataean royal house that passed into the emperor's patrimonium after the annexation.⁹⁰ In addition, two inscriptions in the southern Ḥawrān from the villages of Sama and Jabin delineate the boundaries private property and land that is imperial property, each has the Greek equivalent (*engion tamiakon*) for the Roman Latin *ager fiscalis*, indicating imperial land.⁹¹ Another possibility is the town of as-Salt, just 15 km from 'Ammān, the former Ottoman capital of Transjordan, which bears a name perhaps derived from *saltus*, suggesting it once was a Roman imperial estate, perhaps protected by a vexillation of the Legio VI Ferrata.⁹² Further south, Byzantine geographers list a *Salton Hieratikon* in the metropolis of Petra, perhaps located in the forest districts at Khirbat al-Miqdis, 11 km south of ash-Shawbak.⁹³ It could also be a sacred area in the immediate vicinity of Petra formerly associated with the royal dynasty of Nabataea before being acquired by Rome. In AD 385, both Areopolis and Petra were vigorously defending their temples against attacks by Cynegius, the praetorian prefect of the East.⁹⁴

Other possibilities may be associated with the imperial efforts in creating estates in border regions to develop the agricultural potential of marginal lands, farmed normally in late antiquity by coloni, ingenui and slaves.⁹⁵ Many of the late Roman forts located on the periphery of the settled region bear names derived from military ter-

minology—al-Qaṣṭal, al-Lajjūn and al-Qaṭrāna reflect Latin *castellum*, *legio* and *castra*. Such names suggest this was previously undeveloped territory, and that they represent efforts to extend the agricultural and pastoral potential of the region. Such forts may have been responsible also for providing animals to the *stationarii* and the cavalry units located in the region.⁹⁶ These lands would comprise part of the *prata* or *territorium* of the legionary and auxiliary units. A papyrus from Dura Europos on the Euphrates in Syria dating to AD 221 indicates that imperial freedmen issued barley to a detachment of soldiers at nearby Appadana *ex praedis fiscalibus*, in essence transferring rent in kind from an imperial estate to soldiers as provisions for their animals.⁹⁷ It may be assumed that such transfers were typical for imperial estates.⁹⁸ It is possible that the military camps in Arabia had similar functions. Some mention should also be made of the recent discovery in 1993 of more than 150 scrolls of carbonized papyri during the excavations of a Byzantine church of the sixth century at Petra.⁹⁹ They are mainly economic documents ranging in date from AD 528 across the sixth century and deal with the possessions and acquisitions of property by local families in the agricultural hinterland extending from 10 to 30 km from the city. Listed are the names of towns, villages, and farmlands, in the region such as Augustopolis (Udhruh), and Kastron Zadakathon (Ṣadaqa), and Eletheropolis (Bayt Jibrin in Palestine). They are certainly equal in importance to the Nessana papyri found in the Negev a half century ago which are from the same period, but the Petra papyri provide far more insights into the rural landscape.

The general result emerging from surveys of the rural regions throughout the Mediterranean has been to find more and more of the population in the countryside. What such features as discussed above illustrate is that the Transjordanian landscape should not be considered as just a bland world of sameness. Like other parts of the Roman and Byzantine empire, it was a world of diversity and

⁸⁸ N. Lewis, *The Documents from the Bar Kokhba Period in the Cave of Letters*. Greek Papyri (Jerusalem, 1989), no. 116, l. 24

⁸⁹ H. Cotton, "Rent or Tax Receipt from Maoza," *Zeitschrift für Papyrologie und Epigraphik* 100 (1994) 548 = *P. Yadin* 2.

⁹⁰ Lewis, *Documents from the Bar Kokhba Period*, 70.

⁹¹ Littmann, *Publications of the Princeton University Archaeological Expedition to Syria IIIA* (Leiden, 1907) no. 28, and *SEG* 17 (1960) no. 760.

⁹² See P.-L. Gatier, *Inscriptions de la Jordanie* 2 = *IGLS XXI* (Paris, 1986) no. 3.

⁹³ George of Cyprus, *Descriptio orbis Romani* 1057 (ed. H. Gelzer 1890), with E. Honigmann, *Le Synekdèmos d'Hiérokles et Georges de Chypre*, Bruxelles, *Corpus Bruxellense Historiae Byzantinae, Forma Imperii Byzantini*, I (1939), Pp. 43-44.

⁹⁴ A. H. M. Jones, *The Later Roman Empire, 284-602* (Baltimore, 1964), P. 167, and G. Fowden, "Bishops and Temples in the Eastern Roman Empire A.D. 320-435," *Journal of Theological Studies* 29 (1978), Pp. 64-76.

⁹⁵ D. J. Crawford, "Imperial Estates," *Studies in Roman Property*, ed. M. I. Finley (Cambridge, 1976), P. 54; D. Kehoe, *The Economics of Agriculture on Roman Imperial Estates in North Africa*, Hypomnemata 89 (Göttingen, 1988), 200-21; R. Delmaire, *Largesses Sacrées et Res Privata: L'Aerarium impérial et son administration du IVe au VIe siècle*, Collection de l'Ecole française de Rome vol. 121 (Rome, 1989), Pp. 679-682.

⁹⁶ R. W. Davies, "The supply of animals to the Roman army and the remount system," *Service in the Roman Army*, ed. D. Breeze and V. Maxfield (New York, 1989), Pp. 167-171.

⁹⁷ *P. Dura* 64 = R. O. Fink, *Roman Military Records on Papyrus* (Cleveland, 1971) no. 91, A, col. I, lines 10-11.

⁹⁸ N. Pollard in *The Roman Army in the East*, ed. D. L. Kennedy (Ann Arbor, 1996) 224; cf. T. K. Kissel, *Untersuchungen zur Logistik des römischen Heeres in den Provinzen des griechischen Ostens (27 v. Chr.-235 n. Chr.)* (St. Katharinen, 1995), 150.

⁹⁹ L. Koenen, "The carbonized archive from Petra," *JRA* 9 (1996), Pp. 177-188.

complexity, a world of farmers and pastoralists for certain, but also one of merchants and artisans.¹⁰⁰ The inclination to divide the population into an elite minority and a broad majority of peasants has obscured this variety of lifestyles. It is now recognized that ancient towns and villages were self-sufficient in regard to their common needs, which were supplied by local craftsmen.¹⁰¹ Their workshops interspersed among agricultural contexts should be recognized. These rural tradesmen and craftsmen have been neglected, but even the small villages in

Egypt had seven to twelve. A small town like Korykos in Rough Cilicia in Asia Minor had over 100 different tradesmen, whereas Pompeii had only about 80. When compared to the slightly over 200 named trades and occupations in Latin inscriptions from Rome, the differences and distinctions between urban and rural begin to diminish.¹⁰² What this search for land-divisions, rural markets, villas, and estates represents is a quest for the "lost peoples" on the Jordanian landscape.

¹⁰⁰See A. Bounni, "Métiers et fonctions à Palmyre," *Études et Travaux* 15 (Warsaw, 1988), Pp. 78-86, and G. Tate, "Les métiers dans les villages de la Syrie du Nord," *Ktèma* 16 (1991), Pp. 73-78. Such a study is still needed for Roman-Byzantine Transjordan, but a beginning is made by L.-A. Hunt, "The Byzantine Mosaics of Jordan in Context: Remarks on Imagery, Donors, and Mosaicists," *PEQ* 126 (1994), Pp. 106-126.

¹⁰¹A. H. M. Jones, "The Economic Life of the Towns of the Roman Empire," *The Roman Economy*, ed. P. A. Brunt (Oxford, 1974), P. 38.

¹⁰²K. Hopkins, "Economic Growth and Towns in Classical Antiquity," *Towns in Societies*, ed. P. Abrams and E. Wrigley (Cambridge, 1978), Pp. 71-72, who emphasizes that the distinction between village and town in antiquity is arbitrary.